REMARKS

Applicants respectfully request reconsideration of this application as amended.

Claims 1-64 and 81 are pending in the application. Claims 1-64 and 81 have been rejected.

Claims 1, 17, 33, and 49 have been amended. Claims 13, 15, 18, 34, and 52 have been canceled. The amended claims are supported by the specification. No new matter has been added.

Applicants reserve all rights with respect to the applicability of the doctrine of equivalents.

Claims 13 and 15 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claims 13 and 15 have been canceled. Applicants respectfully request the withdrawal of the objection to claims 13 and 15.

Claims 49-64 are rejected under 35 U.S.C. 112, second paragraph, as failing to comply with the enablement requirement. Claim 49, as amended, reads as follows.

> A system, comprising:
> a means for appending address registration information to a message;
> a means for sending the message between a router of a router network and a switch of a switch network; and
> a means for using the address registration information to map the switch network from a local area network management system controlling the router network.

Amended claim 49 includes three different means for functions with each function relying on different structural support in the specification. In one embodiment, a switch or a router provides the means for appending address registration information to a

message. A switch or a router in combination with a link provides the means for sending the message between a router of a router network and a switch of a switch network. The local area network management system provides the means for using the address information. Thus, amended claim 49 is not a single means claim. Accordingly, applicants respectfully request the withdrawal of the 35 U.S.C. 112 first and second paragraph rejections for claims 49-64.

Claims 6, 26, 42, and 58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For claim 6, the Examiner indicates that the limitation "address registration information comprises spare bytes" is ambiguous because it is unclear how "information" may comprise "bytes."

Support for claims 6, 26, 42, and 58 is found in the specification. In one embodiment, the address registration information includes an address registration status 610, an interface index 612, and an Internet protocol address 614. In an additional embodiment, the address registration information includes a few spare bytes 616. These spare bytes can be used for error checking or if some expansion of the information contained in the address registration information is required. Paragraph [0024]. The address registration status 610, interface index 612, Internet protocol address 614, and spare bytes 616 each require a certain number of bytes as illustrated in Figure 6. Thus, the address registration information includes bytes such as spare bytes 616.

Accordingly, the limitation "address registration information comprises spare bytes" is clear and applicants respectfully request the withdrawal of the 35 U.S.C. 112,

second paragraph rejection for claims 6, 26, 42, and 58.

Claims 49-64 are rejected under 35 U.S.C. 101, because the claimed invention is directed to non-statutory subject matter.

Amended claim 49 includes three different means for functions with each function relying on different structural support in the specification. In one embodiment, a switch or a router provides the means for appending address registration information to a message. A switch or a router in combination with a link provides the means for sending the message between a router of a router network and a switch of a switch network. The local area network management system provides the means for using the address information. Thus, amended claim 49 is a machine claim relying on structure in the specification for each of the means for functions. Accordingly, applicants respectfully request the withdrawal of the 35 U.S.C. 101 rejections for claims 49-64.

Claims 1, 2, 4-23, 25-39, 41-55, 57-64, and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Non-Patent Literature document titled "Integrated Local Management Interface (ILMI) Specification, Version 4.0" (Hereinafter ILMI Spec) in view of Non-Patent Literature document titled "LAN/WAN Management Integration using ATM CNM Interface" by Hanaki et al. (hereinafter Hanaki).

Claim 1, as amended, includes the limitation "wherein either the local area network management system or the wide area network management system uses the address registration information to map the network of routers and the network of switches by accessing each router in the network of routers and each switch in the network of switches."

The Office Action reads as follows.

> Address registration information (section 9 at page 60) to be appended to a message [ILMI message] sent between a router [first ATM device] and a switch [second ATM device] (Fig. 1 at page 3) over a connection between the router and the switch [ILMI communication takes place between adjacent IMEs over physical links or virtual links] (page 1, under section Scope), wherein either the local area network management system or the wide area network management system [Network Management Station] uses the address registration information to map the network of routers and the network of switches (pages 77-79 section Annex A. Network Management Access to ILMI data). (Office Action, 09/22/08, pages 7 and 8).

Applicants respectfully disagree with this characterization of ILMI Spec. In particular, ILMI Spec fails to disclose a local area network management system or a wide area network management system that uses address registration information to map the network of routers and the network of switches.

ILMI Spec reads as follows.

- An ATM Interface Management Entity (IME) can access, via the ILMI communication protocol, the ATM Interface MIB information associated with its adjacent IME.
- Whether Access to additional information (beyond the adjacent IME's ATM Interface MIB information) is available via the ILMI communication protocol is currently unspecified, and is regarded as a vendor implementation choice.
- This document pertains to the ATM Interface MIB structure of the "Local ATM Interface" (i.e. between adjacent IMEs) only.

(ILMI Spec, page 1).

> In addition to its role for local interface management, the data in ILMI MIBs are also useful for general Network Management functions such as configuration discovery, fault isolation and troubleshooting. For example, an ATM service provider may want to confirm the configuration of the ATM interfaces on devices attached to its network, even though it does not usually have direct NM access to those external devices.
>
> This section defines a proxy-agent mechanism that uses the existing functions of the ILMI to provide NMS access to ATM Interface MIB

> data. The proxy uses the agent-role capability of the local IME to access ATM Interface MIB data in the local system, and the manager-role capability of the IME to access ATM Interface MIB data in the neighboring system. The solution defined here is depicted in Figure 6.
>
> (Annex A of ILMI Spec, page 78).

The ILMI Spec discloses using a proxy-agent to provide access to a neighboring ATM interface with MIB data as illustrated in Figure 6. The ILMI Spec discloses that whether access to additional information beyond the adjacent IME's ATM Interface MIB information is available via the ILMI communication protocol is currently unspecified. Thus, the ILMI Spec is silent regarding the access and mapping of a neighboring network of switches or routers.

In contrast to amended claim 1, ILMI Spec fails to disclose that the proxy-agent uses address information to map a neighboring network of switches or routers. ILMI Spec fails to disclose the limitation "wherein either the local area network management system or the wide area network management system uses the address registration information to map the network of routers and the network of switches by accessing each router in the network of routers and each switch in the network of switches."

Therefore, ILMI Spec does not disclose or suggest the limitations of amended claim 1.

Hanaki discloses using a cooperative network management system to consolidate ATM-WAN customer network management services and ATM-LAN management information. (Hanaki, page 13). A WAN OS (CNM agent) has a view of WAN elements and a LAN NMS has a view of LAN elements. (Hanaki, page 14).

In contrast to amended claim 1, Hanaki fails to disclose that the CNM agent uses address information to map LAN elements or that the LAN NMS uses address information to map WAN elements. Hanaki fails to disclose the limitation "wherein either the local area network management system or the wide area network management system uses the address registration information to map the network of routers and the network of switches by accessing each router in the network of routers and each switch in the network of switches."

Therefore, Hanaki does not disclose or suggest the limitations of amended claim 1.

It is respectfully submitted that ILMI Spec does not suggest a combination with Hanaki, and Hanaki does not suggest a combination with ILMI Spec. ILMI Spec discloses using a proxy-agent to provide access to a neighboring ATM interface with MIB data as illustrated in Figure 6 while Hanaki discloses using a cooperative network management system to consolidate ATM-WAN customer network management services and ATM-LAN management information. It would be impermissible hindsight to combine ILMI Spec with Hanaki based on applicants' own disclosure.

Furthermore, even if ILMI Spec and Hanaki were combined, such a combination would lack the limitation "wherein either the local area network management system or the wide area network management system uses the address registration information to map the network of routers and the network of switches by accessing each router in the network of routers and each switch in the network of switches" as recited in amended claim 1.

Therefore, in view of the above distinction, neither ILMI Spec nor Hanaki,

individually or in combination, disclose each and every limitation of amended claim 1. As such, amended claim 1 is patentable over ILMI Spec in view of Hanaki under 35 U.S.C. § 103(a).

Independent claims 17, 33, 49, and 81 include similar limitations in comparison to the limitations of amended claim 1. Therefore, in view of the above distinction, neither ILMI Spec nor Hanaki, individually or in combination, disclose each and every limitation of claims 17, 33, 49, and 81. As such, claims 17, 33, 49, and 81 are patentable over ILMI Spec in view of Hanaki under 35 U.S.C. § 103(a).

Claims 2, 4-12, 14, 16, 19-23, 25-32, 35-39, 41-48, 51-55, 57-64, and 81 depend from and include the limitations of one of the corresponding independent claims noted above. As discussed above, Hanaki fails to cure the deficiencies of ILMI Spec with respect to claims 1, 17, 33, 49, and 81. Therefore, claims 2, 4-12, 14, 16, 19-23, 25-32, 35-39, 41-48, 51-55, 57-64, and 81 are patentable over the combination of cited references.

Claims 3, 24, 40, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over ILMI Spec in view of Hanaki and in further view of US Patent Publication No. 2002/0055988 of Crooks (hereinafter Crooks).

Claims 3, 24, 40, and 56 depend from and include the limitations of one of the corresponding independent claims noted above. It is submitted that the Crooks fails to cure the deficiencies of ILMI Spec in view of Hanaki noted above with respect to the independent claims and, therefore, claims 3, 24, 40, and 56 are patentable over the combination of cited references.

It is respectfully submitted that in view of the amendments and remarks set forth herein, the rejections and objections have been overcome. If there are any additional charges, please charge them to our Deposit Account No. 02-2666.

Respectfully submitted,
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